

STUDY CRITICAL THINKING OF HAMEDAN WELFARE OFFICE EMPLOYEES

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Abstract

The aim of this study was to identify the level of critical thinking in welfare office employees. Through a descriptive survey research, from population of Hamedan Welfare Office employee, 168 persons were selected using classified random sampling. The required data was collected by "B form" California critical thinking questionnaire, and then it was analyzed using single sampling t-test and spss software. Results showed there is a significant difference between mean of critical thinking scores in components of analysis, evaluation, inference, inductive reasoning, deductive reasoning and total score with theoretical mean, so that we could mention critical thinking mean of Welfare Office employees is less than theoretical mean.

Keywords: evaluation, inductive reasoning, deductive reasoning, inference, analysis, critical thinking

Introduction

If we consider the starting point of unfinished road of human societies education as divine bonds in essence of learner, eager to learn and human knowledge, its continuum is to learn through observation, experience, trial and error and achieving group experiences (Shabani Syjany, 2003). Considering global status and remarkable development of various technologies ,especially communication and information technology may be imagined that training and education should merely focus on application and training users for utilizing this technology properly, but only having and using this technology in training and education world won't be helper of today and future human (Badrigargary and Fathiazar, 2006).

Nowadays, in order to face exciting evolutions of 21st century, learners should achieve thinking skills increasingly for making proper decisions and solving complex problems of the society (Shabani Sijani, 2003). Khalilzadeh and Soleiman Nejad, 2004) believe that one of the skills that should be trained to learners in the system is thinking and pondering skills. According to some experts, one of the main ways to achieve this goal is to equip people with critical thinking skills (Facion, 2011). Critical thinking is a self-leadership thinking, self-discipline, self-control and self-reform (Paul and Elder, 2006).

Slavine (quoting Seif, 2010) has defined critical thinking as "ability to make logical decision regarding what we should do and what we should believe". Egean and Cavchake (2001) have define critical thinking such: " ability and tendency of any individual to measure results of issues and deciding regarding them based on evidences". Moreover, Wolfleake (2004, quoting Seif, 2010) has devined critical thinking as evaluation of results through logical and regular searching

through issues, evidences and solutions. Critical thinking is a cognitive skill that helps people receiving the facts (Badrygargary and Fathyazar, 2006). Robin (2002, quoting Maleki, 2006) has defined critical thinking as a process to use reasoning for recognition correct from incorrect which could submit a new perspective for unknown and hidden items. Critical thinking is a fictional thinking including identification, evaluation and arguing. Moreover, the studied have shown critical thinking is application of thinking skills, analysis and information combination, identification and problem solving and its evaluation and conducting each is done through meta-cognitive skills.

Critical thinking causes the individual has the highest understanding from evidences and documents and understanding unable people to disclose ideas and senses which exist beyond everything (Johnson,2002). Even in everyday situations, the critical thinking shows us true judgment between success and failure (Andolina, 2001). Pitter (2005, quoting from Maleki, 2006) considers the first critical thinking skill as analysis and in the next level, interpretation, self-adjustment, evaluation and inference. In fact, any individual studies and revises beliefs, opinions and attitude by reasoning and logic and he makes decisions based on reasons and evidences. Critical thinking is targeted more than cashing and any mental activity. Critical thinking is a process providing information and informative sources and any individual will be able to evaluate and order them coherently and logically. Moreover, he could relate them with other information while considering other sources as well as study its tacit concepts (Maleki, 2006) In this process, critical thinking approach that is wisdom and individual's awareness is essential (Abbott, 1993). Santrock also believes that we could create wisely a critical thinking through offering patterns and encouraging its attitudes and skills. According to Ristow (1988), critical thinking can be enhanced through practice and training. Deange and Exely (1998, quoting from Shabani, 203) propose four teaching techniques in small groups, student seminars, learning based on problem solving and playing a role which lead to critical thinking increase. Carbiling and Collnease (1996 quoting Seif, 2010) showed in a study that students whose teaching method had more focus on group participation have used learning strategies based on critical thinking. Tingaly (1998, quoting Seif, 2010)also concluded that constructive learning environment in educative psychology course could increase critical thinking. Mcousene et al.(2000, quoting Giling and Rashtchi, 1384) studied effect of education method on research on critical thinking ability of learners. The results indicated students who gained low scores in critical thinking test had higher scores after training. Hergovich and Arendasy (2005) indicated that there is no correlation between critical thinking and meta-normative beliefs and subjects who had enough experience had more true beliefs and better reasoning ability.

Amir (2009) showed in a research that all teachers could improve status of their critical thinking by increasing amount of questions being exchanges at class and they could achieve a high level of thinking.

The results of the study of Shabani Sijani (2003) showed the research method as a group activity has valuable role in flourishing the critical thinking skills. In this study, among skills of critical thinking, the three important properties including comparison, identification, and judgment have been examined. In study of Mashallahi Nejad (2011) showed the methods of problem solving will lead to grow and emerge of critical thinking skills in its proper path. Most experts believe critical thinking skills are grown optimally while discussing and exchanging thinking and solving problems, whereas lecture method is widely used for training in Iran Education System.

It caused that teacher and student exchange less information and talk over various subjects with each other (Gilik and Rashtchi, 2005). According to the mentioned issues and job obsession of employees of Welfare Office in terms of job concepts and clients of this office, the main

problem of the current research was that at which level the amount of critical thinking of the employee of Welfare Office employee in Hamedan is located.

Research Methodology

The method used was a descriptive survey. The population includes 334 employees of Hamedan Welfare Office in 2013. By classified random sampling method, 168 persons were selected as sample. Then, the required data were collected by "B form" critical thinking questionnaire. The "B form" California critical thinking questionnaire includes 34 questions, multiple choice (4 or 5 alternatives) with one correct answer for specific measurement of critical thinking skills. In this test, per each correct answer, one point is given to the respondent and total of the correct answers is regarded as total score (maximum 34 scores). The required time to answer the questions was 45 minutes. A correct answer is the one which matches answer key. Questions of the test in a new classification is in three fields of analysis, evaluation and inference, but in traditional classification, 4 questions were released and 30 others have been classified in two fields of inductive and deductive reasoning.

Therefore, the aforesaid test measures five cognitive skills of critical thinking including: analysis, evaluation, inference, inductive reasoning and deductive reasoning (Baker, 2002).

The reliability coefficient of the aforesaid test was determined using formula 20 of Coder-Richardson (0/71) (Jacobs,1995). Moreover, reliability coefficient of this test for the current research was 0/69 using Coder-Richardson method.

Research Findings

Demographic findings show 22% of the people of the sampling group had diploma, 11/3 % associate degree, 51/2 % Bachelor, 12/5 % Master and 3 % PhD. Additionally, in terms of major of study, 77/4 % were human sciences, 8/3 science, 11/3 technical and engineering and 3 % medical sciences. Status of critical thinking components of the sampling group has been described in table 1.

Table 1: Mean and standard deviation of critical thinking components of sampling group

Com ponent	M ean	S D
Anal ysis	5 2/1	1 1/9
Eval uation	2 5/6	1 1/1
Infer ence	5 3/4	1 1/7
Dedu ctive reasoning	5 5/4	1 1/9
Induc tive reasoning	7 4/1	5 1/9

Table 1 describes components of critical thinking of sampling group. As it is shown the highest mean in the components of critical thinking belongs to the deductive reasoning. In the following, to compare the observed mean and theoretical mean of critical thinking and its components, single-

sample t-test was used and the results have been presented in table 2. It's noteworthy to mention that before applying the hypotheses of this test including normality of data was studied, after assuring of the hypotheses, this test was used.

Table 2: Comparison between observed mean and theoretical mean of critical thinking and its components

Comp onents	Ob served mean	Theo retical mean	t	f	P
Anal ysis	/51 2	4/5	3 -17/13	67	** 0/0001
Evalu ation	/26 5	7	8 -11/02	67	** 0/0001
Infer ence	/54 3	5/5	2 -17/95	67	** 0/0001
Deduc tive reasoning	/54 5	8	0 -16/45	67	** 0/0001
Induct ive reasoning	/71 4	7	6 -17/18	67	** 0/0001
Total	/56 21	32	6 -24/79	67	** 0/0001

**P<0/01

Results of single sample t-test show there is a significant difference between the observed mean and theoretical mean of analysis aspects ($t_{(167)}=-17/313, P<0/01$), evaluation ($t_{(167)}=-11/802, P<0/01$), inference ($t_{(167)}=-17/259, P<0/01$), deductive reasoning ($t_{(167)}=-16/045, P<0/01$), inductive reasoning ($t_{(167)}=-17/618, P<0/01$), and total score of critical thinking ($t_{(167)}=-24/679, P<0/01$). In a way that the mean of observed scores are significantly less than theoretical mean.

Discussion and Conclusion

The purpose of this study was to determine the level of critical thinking of welfare office. The results showed that the mean of critical thinking scores in components of analysis, evaluation, inference, deductive reasoning, inductive reasoning and total score are less than the theoretical mean. This finding was consistent with research results of Yousefi Saedadabi, Yazdanpanah Norouzi and Ghasemi (2009). Yousefi Saed Abadi, Yazdan Panah Norouzi and Ghasemi (2009) in a research studied amount of critical thinking of scientific boards' member, the results showed scores mean of participants in this research comparing to theoretical mean of critical thinking in all components have gained less score.

In addition, along with results of this research, researches of Gharib (2006), Bahmani, Yousefi, Nemat Bakhsh, Changiz and Mardani (2005), Eslami (2003), Hosseini and Bahrami (2002), Abdehagh (2004) showed that critical thinking skills in Iran are less than expected amount after 4 years of university and people are weak at critical thinking. While, critical thinking as an educational result at the current time, especially in relation with professional activities and higher education have been known formally and increasing critical thinking skills level is considered as an expectable result from higher education and this result is needed for revision in present education programs and using more active education methods in training.

Additionally, comparing to the achieved results in other countries, results of the current project indicate lower scores mean in comparison with these countries. For instance, Philips et al. (2004, quoting from Soleiman Nejad and Ayeramlou, 2012) in study of experts and American chemist instructors, the results showed scores mean of these companies in critical thinking test in analysis component was 4/9, in evaluation 6/7, in inference 5/8, in deductive reasoning 7/8, in inductive reasoning 7/6 and total score was 17/4.

Moreover, the results of Hichkak research (2003) indicated the mean of critical thinking scores in Melbourne University was 18/76 and in Monash University of Australia was 20/35. Findings of this research show Iran Education System has some inconveniences in education of critical thinking. Whereas citizen education for a democratic society and being present in modern pluralized world despite widespread changes in traditional patterns of life and variety of thoughts, motivations, information and life require better understanding from others and in vaster area better recognition of the world and its necessity is mutual understanding, peaceful exchanges, broad-mindedness, free action, opposed opinions, evaluation, correct judgment or critical thinking. Nowadays, effect of critical thinking by problem solving plays an essential role in people's life and in order to face exciting evolutions of 21st century, thinking skills should be increasingly used for appropriate decision-making and solving complex problems of the society (Shabani, 2003).

According to Babamohammadi and Khalili (2004), common methods of education train certain people with abundant theoretical information which are unable to solve even the smallest problem in the society in the future. In spite of critical thinking importance, in practical state, Iran Education System has no written program for growing critical thinking (Bahmani, 2005). Therefore, based on the taken results regarding importance of critical thinking issue and lowness of critical thinking level in the country, certain education and training should be placed in the education system for growing critical thinking. Moreover, it is proposed to conduct more researches regarding critical thinking on the other groups.

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